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25 June 1982

MEMORANDUM FOR: Director of Central Intelligence

VIA: Deputy Director of Central Intelligence
Executive Director

FROM: Harry E. Fitzwater
Deputy Director for Administration

SUBJECT: SAFE

1. The attached was prepared by [redacted] the Contracting Officer's Technical Representative (COTR) of the Consolidated SAFE Project Office (CSP0). in response to your direction at the 22 June SAFE meeting. As noted in [redacted] paper, the evaluation of the software packages must be done with care, otherwise we will continue to waste funds and may force the analysts to live with software problems for the next twenty years.

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2. [redacted] paper assumes that the CSP0 is charged to meet the SAFE requirements provided by DDI and DIA. However, it is our intent to examine trade-offs between the costs to meet these requirements against value received. It may be that considerable cost savings and time can be realized by this action.

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3. As you directed, we will provide you with a report in 30 days on the availability of software, estimated difficulties in augmentation and integration and associated costs. In the meantime, the Project Director has been asked to direct TRW to reduce staffing to the level necessary to support the evaluation phase.

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[redacted]
Harry E. Fitzwater

Attachment

PROPOSED APPROACH FOR REDIRECTING THE SAFE PROJECT

It has been proposed that the SAFE project be redirected to change the method of its implementation. The proposed approach recognizes that SAFE's requirements are strongly related to commercial developments in the areas of data base systems, electronic mail and office automation. Furthermore, software currently available within the Government is also applicable to the users' needs. While not all of SAFE's requirements can be fulfilled by these sources, it is the intent of the implementation approach to minimize any software development by purchasing, modifying, and integrating available software.

Mail functions in SAFE include mail analysis, mail dissemination, mail viewing, and mail storage and retrieval. Commercially available electronic mail software considers only the simple functions related to the creation, editing, and distribution of correspondence and messages. Within SAFE these latter functions are referred to as "route" (mail distribution) and "compose" (text or word processing). These functions can be fulfilled by available software such as Computer Corporation of America's COMET-204 and IBM's SCRIPT, respectively. This observation is a cursory look at the requirements for mail distribution which may not fully reflect the editorial and coordination processes of the intelligence production cycle. Additionally, the users may not wish to limit themselves to a single method of text or word processing.

The more important mail functions are directed as the generation of information from the electrical traffic (mail) input to SAFE. It is the manipulation of this information which is of consequence to the intelligence analyst and not simply the manipulation of the raw document or cable. The determination of the relevancy of a mail item to the users' specified needs (interest profile) is mail analysis and dissemination.

The mail analysis (determination of information content) and match to users' interests (dissemination) are functions which must be developed for SAFE. The current Pilot Mail Operation provides a prototype of this capability. [redacted]

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[redacted] has been working on the development of this process for SAFE. They have significant prior experience in the subject and it is the one area of SAFE's prior development in which the Government has some confidence in its successful realization. The SAFE Project Office is considering an alternative approach which is to augment the Pilot Mail Operation software which was developed [redacted]

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It is important to confirm that no commercially available products are applicable before proceeding with either implementation approach. Mail viewing (the presentation of the electrical traffic to the user at the terminal) can be facilitated by using text editing capabilities. Alternatives in the area have yet to be investigated.

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The storage and retrieval of data derived from the analysts' mail become references (indices) to this corpus. Data base management systems are required to support both search and maintenance of the derived data and the raw traffic. Files supported by SAFE include large global data collections, such as the central index and installation file, and small, highly interactive file systems belonging to individual users. The applicability of commercial products to support these products has yet to be determined. Previous analyses of commercial data base management systems addressed only the hosting of the CIA intelligence data files (DIAOLS) within SAFE. In addition to completing the analysis of the use of these data base management systems within SAFE, a determination of the augmentations required to fulfill the totality of SAFE's requirements and their cost must be performed. The most promising DBMS for the DIAOLS problem is Computer Corporation of America's M204. It is highly likely that this software can support the storage and retrieval requirements for mail derived data as well as DIA structured file data. This analysis must be completed. Other alternatives include use of the CIA developed AIM software.

While it is possible to identify products such as IBM's STAIRS and Mead Data General's LEXIS for the text searching needs, it remains to be established whether these products provide the functional completeness and performance requirements specified for SAFE. Other considerations include the degree to which these systems can be extended (to provide the missing capabilities) and the degree to which the vendors will support (and make) the desired modifications. It would be naive for the Government to accept without investigation, assertions by the vendors or consultants of the functional capabilities, and more importantly, performance of their products. The Government must contact customers of these vendors to determine the quality of the products and degree of support provided by the vendors. Any remaining doubts can only be satisfied by the execution of benchmarks against the products. Unfortunately, the Government cannot control when and to what degree users of these products may be willing to discuss their experiences with us. The duration of the evaluation phase takes into account time necessary for these contacts but not for any required benchmarking.

The systems environment for these various packages must be examined. A cursory examination indicates that the IBM VM/CMS operating system, now used by the Office of Data Processing (ODP), provides a rich and robust environment to host the user interactive environment. The IBM MVS operating system, also in use by ODP, supports most of the commercial packages. At issue is the mechanism (systems software) required to interface these environments. Experience to this end exists with ODP. The application of the VM/MVS systems interface mechanism to SAFE and the proper hosting of software within these systems must be evaluated as there are alternative approaches. The degree to which an integrated user interface is possible depends on the ability to provide a responsive network architecture.

In all, the number of technical decisions to be made, their complexity, and the inability of the Government to control the rate at which the required information will be made available mitigates against the completion of the engineering analysis within 30 days. The present plan calls for the definition of these analyses within two weeks and their completion within 90 days. Progress toward these objectives will be continuously monitored and reported on. A report on progress, accomplishments, technical approach, and preliminary costs and schedules in the evaluation phase will be provided in 30 days as directed by the DCI on 22 June. While the

analyses will be completed within 90 days, the integration and presentation of the engineering decisions into a composite system design has been scheduled for February 1983. The failure of the previous development approach was due, in part, to inadequate preparation (analysis and design synthesis) prior to attempted implementation. We do not intend to repeat that performance. Finally, it is important to exercise care in the selection of these software packages. Once selected and installed, the users will start building files in the SAFE environment. A serious error in selection of the data base support software which requires the conversion of files to some new product will be disruptive to the intelligence analysts' work and extremely costly. The proper perspective is to view the selection of a data base product as one that will be used for a ten to twenty year period.

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DDA:HEFitzwater:kmq (25 Jun 82)